

REMARKS

Reconsideration of the above referenced application in view of the enclosed amendments and remarks is requested. Claim 20 has been cancelled. Claims 24 and 25 have been added. Claims 1-19, and 21-25 remain in the application.

ARGUMENT

Claims 1-23 are rejected under 35 USC 103(a) as being unpatentable over Conklin et al. US Patent 6,141,653 (hereinafter Conklin) in view of Muftic, US Patent 5,850,442.

Claims 1-23 are rejected under 35 USC 103(a) as being unpatentable over Crawford et al. US Patent 6,502,113 (hereinafter Crawford) in view of Muftic, US Patent 5,850,442.

Embodiments of the present invention provide a mechanism for binding public keys of legal entities (e.g., people, companies, etc.) with shared sub-processes of business processes, thereby tying process decisions to public keys which are in turn tied to (non-electronic) business contracts. Thus, embodiments of the present invention support shared processes without the use of trusted third parties (like certificate authorities or other trusted third parties) and help to deter potential for fraud in such processes.

Embodiments of the present invention also describe a method and apparatus for managing the lifecycle of an electronic contract. The invention defines a process for creating and modifying a shared business process. It identifies parties as participants wherein each party is a shared contributor or agent, with no dominant authority or hierarchy among the parties. The invention creates an environment where each party may cross-check each other during operations of the shared process. The electronic contract associates roles with process elements, thereby mapping items in a template within the electronic contract to actual resources of the parties for performing operations of the shared process.

One feature of the present method and apparatus is that of a *role certificate*. After the parties negotiate a contract governing their relationship, the company officers digitally sign electronic contract (which defines the shared process) using the private keys of the key pairs of the parties. A company officer may delegate signing responsibility for the electronic contract to another key, but if he or she does so, he or she must explicitly limit authority under the contract using a role certificate. A role certificate may be an electronic document including a public key and distinguishing information such as a role relevant to the shared process. Role certificates may be presented by participants to the other party to verify, according to the trust rules defined in the electronic contract, that the presenting party is authorized to perform at least a part of the shared process. Role certificates associate a resource (such as a participant) with a shared process element. The role certificate may be signed, thereby binding the key with the information contained therein. Any key used to perform a digital signature of the role certificate must be a key from the electronic contract for the shared process or a delegate of that key (e.g., in the same key hierarchy). The parties must agree on a delegation mechanism as part of the creation of the electronic contract. The delegation mechanism may include issuance of role certificates defining rules for using the keys and managing the shared process.

Independent claims 1, 9, and amended claim 17, and newly submitted independent claims 24 and 25, all recite the limitation of issuing one or more role certificates to participants of the shared business process, the role certificates defining authorization of participants to perform at least a part of the shared business process and for using public keys associated with the electronic contract.

The Office action cites Conklin, Muftic, and Crawford as prior art.

Conklin discloses a system for interactive, multivariate negotiations between buyers and sellers in an on-line community using a negotiations engine hosted at a service provider's website. By using the negotiation engine at the website, buyers and sellers can negotiate contract terms for a commercial transaction. Documents may be created during the negotiation process and communicated to the buyers and

sellers. Conklin uses a "middle man" called a sponsor to manage the community and control the negotiation engine.

Conklin does not teach or suggest anything about role certificates as described in the present specification and as recited in the present claims.

Muftic discloses an electronic commerce system on an open network such as the world wide web (WWW) whereby commercial transactions may be protected by well-known techniques of public key cryptography. Muftic uses smart card technology and smart card readers to provide security for users logging on to a commerce system, and for users to conduct common electronic business transactions.

Muftic does not teach or suggest anything about role certificates as described in the present specification and as recited in the present claims.

Crawford discloses a method of managing negotiations between parties, whereby a computer system keeps track of revisions to a contract document made by the parties. Crawford tracks revisions in the document so that clauses that have been modified by the parties during negotiations may be easily visible.

Crawford does not teach or suggest anything about role certificates as described in the present specification and as recited in the present claims.

Since neither Conkling, Muftic, nor Crawford, either alone or in any combination, teach or suggest the claim limitation of role certificates as recited in independent claims 1, 9, 17, 24, and 25, therefore these claims are allowable. Since these independent claims are allowable, all claims dependent therefrom are also allowable.

CONCLUSION

In view of the foregoing, Claims 1-19 and 21-25 are all in condition for allowance. If the Examiner has any questions, the Examiner is invited to contact the undersigned at (503) 264-8074. Early issuance of Notice of Allowance is respectfully requested.

Respectfully submitted,

Dated: 9/10/03

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